

REMARKS

The Office Action allowed Claims 1-8, 40 and 41. However, it has objected to Claim 47 under 37 C.F.R. §1.75(c), alleging that it fails to further limit the subject matter of a previous claim. Moreover, Claims 9-39 and 42-48 are rejected under 35 U.S.C. §112, second paragraph as allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards under 35 U.S.C. §102(b) as allegedly defining subject matter which is anticipated by the teachings in EP 947 466, of which Rusunki, et al. are inventors.

Applicants have amended the claims, which when considered with the comments hereinbelow, are deemed to place the present case in condition for allowance.

Claim 47 has been cancelled; therefore, the objection thereto has been rendered moot.

Claims 9, 20 and 46 have been amended to recite that the nanotubes are carbon nanotubes. Support therefore is found on page 9, lines 11-26 of the instant specification. Moreover, Claims 9, 20, 30, 46 and 49 have been amended to recite that the coating of diamond or diamond-like carbon is present in an amount or thickness to prevent evaporation of carbon from the nanotubes. Support thereof is found on page 21, line 22 to page 22, line 3 of the instant application. Claims 50 and 51 reiterate the preferred thickness of the coating. Support is found on page 21, lines 1-9 of the instant specification.

No new matter is added to the specification.

The Office Action has rejected Claims 9-39 and 42-48 under 35 U.S.C. §112, second paragraph. The Office Action alleges that the claimed subject matter does not clearly point out and distinctly claim the present invention.

As amended, the claims recite that the coating of DCC or diamond is present in a thickness or amount to prevent evaporation of carbon from the carbon nanotubes. It is respectfully submitted that this apprises one of ordinary skill in the art of the scope of the claims, as there is a very simple test to determine whether there is sufficient amount of diamond or diamond-like coating the nanotubes.

As described on page 21, line 23, et seq., during normal operation of the electron field emitter having a cathode comprised of nanotubes but which is not coated with diamond or diamond-like carbon, traces of carbon from the cathode on the walls of the device were seen. However, when the nanotubes are coated with diamond or diamond-like carbons, no such traces of evaporation of carbon were noticed on the walls. Thus, a test of whether sufficient amount of coating is applied is to notice whether traces of carbon are present on the walls of the device when it is in operation. If traces of carbon are not present, then sufficient amounts of coating is present.

Consequently, the metes and bounds of the rejected claims are defined. Thus, the claims, as amended, clearly define the subject matter which applicants regards as the invention. Therefore, the rejection of Claims 9-39 and 42-48 under 35 U.S.C. §111, second paragraph is obviated; withdrawal hereof is respectfully requested.

Pursuant to the rejection of Claim 49 under 35 U.S.C. §102(b), the Office Action cites Kusunoki et al.

At the outset, applicants wish to point out that it is improper to reject Claim 49 under 35 U.S.C. §102(b). The present application has claimed priority under 35 U.S.C. §119(e) of provisional application 60/187,834, filed on February 16, 2000. Support for the claimed subject matter is found on Page 3, line 1 to Page 5, line 17 of the priority document. Thus, the

present application has an effective filing date of February 16, 2000. On the other hand, the publication date of Kusunoki, et al. is October 6, 1999, which is less than a year prior to the effective filing date of the present application.

35 U.S.C. §102(b) requires, inter alia, that the invention be described in a printed publication more than one year prior to the date of the application for patent in the U.S. Inasmuch as the cited reference was published less than one year prior to the effective filing date of the present application, it is improper to reject Claim 49 under 35 U.S.C. §102(b).

Moreover, Claim 49 is not anticipated by the teachings in Kusunoki, et al. Kusunoki, et al. relate to a method of manufacturing carbon nanotubes by heating SiC under vacuum to remove silicon atoms from the SiC, and forming the carbon nanotubes at a portion of the SiC where the silicon atoms have been removed. However, there is no teaching or discussion therein of uniformly coating the carbon nanotubes therewith diamond or DCC. A review of the cited reference clearly reveals that there is no teaching therein of coating the nanotubes with diamond or diamond-like carbon.

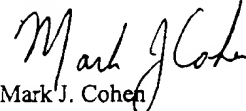
Case law has held that anticipation requires that the prior art reference disclose each and every element of the claim. The absence of one element of the claim from the prior art reference negates anticipation.

Since the cited prior art does not teach, disclose or suggest coating the nanotubes with a substantially uniform coating of diamond or DLC, the reference does not teach or disclose the present invention. Thus, the rejection of Claim 49 under 35 U.S.C. §102(b) is obviated; withdrawal thereof is respectfully requested.

Applicants have reviewed the cited references which are not applied; however, they are deemed not to be relevant to the present invention.

Thus, in view of the amendments and the remarks herein, it is respectfully submitted that the present case is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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